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Three generations of borehole loggers

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It has proven to have great importance to be able to monitor parameters down though a borehole in connection with an ice core drilling project. The measurements can support the drilling during the ice core drilling by monitoring the borehole diameter, temperature, inclination and borehole shape. After the ice core has been drilled borehole measurements can be used for precise temperature profiles, and diameter, inclination and borehole shape can be followed giving information on the ice deformation.
Borehole logging tools have been available in the Danish research group since 1983, where it was used to log the Dye3 borehole (Gundestrup and Lyle-Hansen, JoG, Vol 30, nr 106, 1984). Since then the logger has been used in all the deep Greenland borehole and many of the Antarctic deep boreholes.
During the last five years a new logger has been developed using IMPACT SUBSEA sensors and last year a autonomy logger has also been developed as a light and easy logger to use both in deep and intermediate boreholes not depending on communication to the surface.
The borehole loggers will be described combined with results obtained by the loggers.

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